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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/065,616	11/04/2002	Trevor James Davis		4206
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HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				
			EXAMINER JACKSON, ANDRE K	
			ART UNIT 2856	PAPER NUMBER

DATE MAILED: 11/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application N .

10/065,616

Applicant(s)

DAVIS ET AL.

Examiner

André K. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1-3, 10 and 12-19 is/are rejected.
- 7) ☒ Claim(s) 4-9 and 11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

In amended paragraph [0026], line 4 "annual" should be --annular--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35

U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3,10 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Hatley.

Regarding claim 1, Hatley discloses in "Assemblies and methods for inspecting piping of a nuclear reactor" which has a substantially vertical support (18, Figure 2); a generally arcuate frame (34,70) defining an opening; a holding mechanism (54) arranged on the frame for temporarily fixing the position of the frame adjacent the cylindrical object; a connector (36, Figure 2) arranged between a lower portion of the support and the frame, the connector allowing pivotal movement of the frame, a sensor

assembly (80) arranged on the carrier and positioned adjacent a surface of the cylindrical object and the sensor having a head where movement of the carrier causes the sensor head to move over an arcuate portion of a surface of the cylindrical object (Figure 3) and a carrier (38) being supported by the frame and moveable along a portion of the arc described by the frame (Figures 2 and 3).

Regarding claim 2, Hatley discloses where the holding mechanism for temporarily fixing the position of the frame adjacent a generally cylindrical object is selected from a group consisting of first and second stand-off elements of substantially fixed length and orientation arranged so that contact between the stand-off elements and a surface of the cylindrical object cooperate to establish a generally coaxial orientation of the frame relative to the cylindrical object (Figure 3).

Regarding claim 3, Hatley has a sensor actuator (88) the sensor actuator arranged and configured for fine movement of the sensor head relative to the carrier, the range of movement being sufficient to compensate for variations in positioning the carrier relative to the surface of the cylindrical object and thereby achieve a desired orientation of the sensor head and the surface of the cylindrical object (Figure 3).

Regarding claim 10, Hatley has a sensor actuator (88) the sensor actuator arranged and configured for gross movement of the sensor relative to the carrier, the range of movement being sufficient to position

the sensor adjacent two distinct circumferential portions of the surface of the cylindrical object without requiring repositioning of the frame (Figure 3).

Regarding claim 12, Hatley orients a longitudinal axis of the support generally parallel to a longitudinal axis of the cylindrical object (Figure 2); positioning the frame and carrier for movement (Figure 3); positioning the support so that a lower portion of the support is generally perpendicular to a portion of the generally cylindrical object to be scanned (Figure 3); positioning the frame in a measurement orientation where the frame is generally perpendicular to the support and partially surrounds a portion of the cylindrical object (Figure 3); engaging the holding mechanism to establish a first position of the frame relative to the generally cylindrical object (Figure 3); positioning the sensor adjacent an obstructed portion of the generally cylindrical object (Figure 3); moving the carrier in a generally arcuate path (Figure 3); moving the sensor along a circumferential portion of the obstructed portion of the generally cylindrical object to define a scanned surface and sensing a property of the generally cylindrical object adjacent the scanned surface portion (Figure 3). The carrier (part that holds sensor 5) is on the frame and when moving the frame the sensor would be moved in the generally arcuate path.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hatley.

Regarding claim 13, Hatley does not explicitly disclose releasing the holding mechanism and removing the apparatus from the vicinity of the generally cylindrical object. However, the holding mechanism would have to be released to remove the object in order to measure another object.

Regarding claim 14, Hatley does not explicitly disclose releasing the holding mechanism and repositioning the frame relative to the generally cylindrical object and re-engaging the holding mechanism to establish a second position of the frame relative to the generally cylindrical object. However, the holding mechanism must be released to reposition the frame and re-engage the holding to establish a second position.

Regarding claim 15, Hatley does not explicitly disclose generating a signal corresponding to a value of the property being sensed and communicating the signal to a receiver. However, it is well within the

purview of the skilled artisan to include generating a signal corresponding to a value of the property being sensed and communicating the signal to a receiver since the apparatus of Hatley is a remote object used in nuclear reactors.

Regarding claim 16, Hatley disclose where the carrier is positioned within the frame. The carrier can move via movement of the frame about 90 degrees along an arcuate path in a first direction (Figures 2 and 3). The carrier can also move in a second direction about 180 degrees along an arcuate path in a second direction (Figures 2 and 3).

Regarding claim 17, Hatley has the means to move the carrier via the frame about 90 degrees along the arcuate path and terminating the carrier in approximately the initial position (Figures 2 and 3).

Regarding claim 18, Hatley discloses positioning the carrier at an initial position, the initial position being one in which the carrier is positioned substantially within the frame and positioning the frame at a deflected position relative to the support the deflected position reducing an effective width of the frame in a direction perpendicular to a longitudinal axis of the support (Figures 2 and 3).

Regarding claim 19, Hatley does not explicitly disclose where the sensor heads are in a protected orientation to reduce the likelihood of contact with an obstruction during steps of positioning the support and positioning the frame. However, it is well within the purview of the skilled

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artisan to protect the sensor head during non-movement of the sensor head to keep the sensor from being damaged.

6. Claims 4-9 and 11 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. Claim 20 is allowed.

Regarding claim 20, prior art found and relied upon did not disclose “where the frame end portions are moved relative to the frame base portion to form an enlarged opening” and “wherein the frame end portions are moved relative to the frame base portion to reduce the enlarged opening and complete the arcuate frame” in combination with the other limitations of the claim.

Response to Arguments

8. Applicants' arguments with respect to claims 1,3,10,12-14,16 and 17 have been considered but are moot in view of the new grounds of rejection.
9. Applicants' amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE**

FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

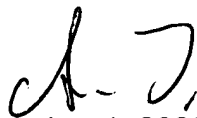
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre' K. Jackson whose telephone number is (703) 305-1522. The examiner can normally be reached on Mon.-Thurs. 7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1782.

A.J. 
November 1, 2003

HELEN KNOX
PRIMARY EXAMINER

